

Attorney Docket No.: 47675-238  
First Named Inventor: Isabel D.C. Markl  
Filing Date: 27 October 2000  
Non-final Office Action Dated: 14 October 2008  
Applicants' last Response and Amendment Dated: 14 April 2009  
Date of Supplemental Response and Amendment: 02 July 2009  
Examiner: Jeanine Anne Goldberg

IN THE CLAIMS:

Applicants, pursuant to 37 C.F.R. § 1.121, submit the following amendments to the claims:

1. (Currently amended) A method for detecting a breast~~diagnostic assay for~~ cancer, comprising:

(a) obtaining a tissue sample from a test tissue;

(b) performing a methylation assay on DNA from the tissue sample, wherein the methylation assay determines a CpG dinucleotide methylation state of ~~one or more coordinately methylated CpG dinucleotide sequences within~~ SEQ ID NO:36; and

(c) comparing the CpG dinucleotide methylation state of SEQ ID NO:36 in the test sample to that of control DNA, wherein hypermethylation of the test sample is indicative of breast cancer~~determining a diagnosis based, at least in part, upon the methylation state of the CpG dinucleotide within the DNA sequence, compared to that of control DNA, wherein the determined methylation state is hypermethylation, and wherein the cancer is breast cancer.~~

2.-3. (Cancelled)

4. (Previously presented) The diagnostic assay of claim 1 wherein the methylation assay procedure is selected from the group consisting of MethyLight, MS-SNuPE, MSP, MCA, COBRA, and combinations thereof.

5.-6. (Cancelled)

7. (Previously presented) A kit useful for the detection of a methylated CpG-containing nucleic acid comprising a carrier means containing one or more containers comprising:

(a) a container containing a probe or primer consisting of at least 12 contiguous nucleotides of a sequence selected from the group consisting of SEQ ID NOS:36 and 37, and the bisulfite-converted sequences thereof; and

(b) additional standard methylation assay reagents, wherein the kit, based at least in part on the probe or primer, is suitable to determine the methylation status of one or more CpG dinucleotides within the sequence selected from the group consisting of SEQ ID NOS:36 and 37.

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8. (Previously presented) The kit of claim 7, wherein the additional standard methylation assay reagents are standard reagents for performing a methylation assay from the group consisting of MethyLight, MS-SNuPE, MSP, MCA, COBRA, and combinations thereof.

9. (Cancelled)

10. (Previously presented) An isolated nucleic acid molecule consisting of a methylated or unmethylated polynucleotide sequence selected from the group consisting of sequences of SEQ ID NO:37 and the bisulfite-converted sequences thereof.

11. (Original) The nucleic acid of claim 10, wherein the nucleic acid is methylated.

12. (Original) The nucleic acid of claim 10, wherein the nucleic acid is unmethylated.

13. (Currently amended) A method for detecting a prostate, breast or colon cancer~~diagnostic assay for cancer~~, comprising:

(a) obtaining a tissue sample from a test tissue;

(b) performing a methylation assay on DNA from the tissue sample, wherein the methylation assay determines a[[the]] CpG dinucleotide methylation state of a CpG dinucleotide~~within~~ SEQ ID NO:37; and

(c) comparing the CpG dinucleotide methylation state of SEQ ID NO:37 in the test sample to that of control DNA, wherein hypermethylation of the test sample is indicative of prostate, breast or colon cancer~~determining a diagnosis based, at least in part, upon the methylation state of the CpG dinucleotide within the DNA sequence, compared to that of control DNA, wherein the determined methylation state is hypermethylation, and wherein the cancer is prostate, breast or colon cancer.~~

14. (Cancelled)

15. (Previously presented) The diagnostic assay of claim 13, wherein the methylation assay procedure is selected from the group consisting of MethyLight, MS-SNuPE, MSP, MCA, COBRA, and combinations thereof.

16. (Cancelled)

17. (Cancelled)

18. (Cancelled)

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19. (Cancelled)